

## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.

Application Serial Number: 10/666,122A  
Source: 1FW16  
Date Processed by STIC: 1/24/07

# ***ENTERED***



IFW16

## RAW SEQUENCE LISTING

DATE: 01/24/2007

PATENT APPLICATION: US/10/666,122A

TIME: 11:12:19

Input Set : A:\11311.1002U.txt

Output Set: N:\CRF4\01242007\J666122A.raw

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1 <110> APPLICANT: Laus, Reiner
2   Gold, Mitchell H.
3   Madhusudan, Peshwa
4   Pickering, Grant
5   Kylstra, Jelle
7 <120> TITLE OF INVENTION: Immunotherapeutic Compositions and Methods for the
8   Treatment of Moderately to Well-differentiated Cancers
10 <130> FILE REFERENCE: 20642/1203635-US2
12 <140> CURRENT APPLICATION NUMBER: US 10/666,122A
13 <141> CURRENT FILING DATE: 2003-09-19
15 <150> PRIOR APPLICATION NUMBER: US 60/412,271
16 <151> PRIOR FILING DATE: 2002-09-20
18 <150> PRIOR APPLICATION NUMBER: US 60/475,335
19 <151> PRIOR FILING DATE: 2003-06-02
21 <160> NUMBER OF SEQ ID NOS: 6
23 <170> SOFTWARE: FastSEQ for Windows Version 4.0
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 386
27 <212> TYPE: PRT
28 <213> ORGANISM: Homo sapiens
30 <400> SEQUENCE: 1
31 Met Arg Ala Ala Pro Leu Leu Leu Ala Arg Ala Ala Ser Leu Ser Leu
32 1 5 10 15
33 Gly Phe Leu Phe Leu Leu Phe Phe Trp Leu Asp Arg Ser Val Leu Ala
34 20 25 30
35 Lys Glu Leu Lys Phe Val Thr Leu Val Phe Arg His Gly Asp Arg Ser
36 35 40 45
37 Pro Ile Asp Thr Phe Pro Thr Asp Pro Ile Lys Glu Ser Ser Trp Pro
38 50 55 60
39 Gln Gly Phe Gly Gln Leu Thr Gln Leu Gly Met Glu Gln His Tyr Glu
40 65 70 75 80
41 Leu Gly Glu Tyr Ile Arg Lys Arg Tyr Arg Lys Phe Leu Asn Glu Ser
42 85 90 95
43 Tyr Lys His Glu Gln Val Tyr Ile Arg Ser Thr Asp Val Asp Arg Thr
44 100 105 110
45 Leu Met Ser Ala Met Thr Asn Leu Ala Ala Leu Phe Pro Pro Glu Gly
46 115 120 125
47 Val Ser Ile Trp Asn Pro Ile Leu Leu Trp Gln Pro Ile Pro Val His
48 130 135 140
49 Thr Val Pro Leu Ser Glu Asp Gln Leu Leu Tyr Leu Pro Phe Arg Asn
50 145 150 155 160
51 Cys Pro Arg Phe Gln Glu Leu Glu Ser Glu Thr Leu Lys Ser Glu Glu
52 165 170 175

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53 Phe Gln Lys Arg Leu His Pro Tyr Lys Asp Phe Ile Ala Thr Leu Gly  
 54 180 185 190  
 55 Lys Leu Ser Gly Leu His Gly Gln Asp Leu Phe Gly Ile Trp Ser Lys  
 56 195 200 205  
 57 Val Tyr Asp Pro Leu Tyr Cys Glu Ser Val His Asn Phe Thr Leu Pro  
 58 210 215 220  
 59 Ser Trp Ala Thr Glu Asp Thr Met Thr Lys Leu Arg Glu Leu Ser Glu  
 60 225 230 235 240  
 61 Leu Ser Leu Leu Ser Leu Tyr Gly Ile His Lys Gln Lys Glu Lys Ser  
 62 245 250 255  
 63 Arg Leu Gln Gly Gly Val Leu Val Asn Glu Ile Leu Asn His Met Lys  
 64 260 265 270  
 65 Arg Ala Thr Gln Ile Pro Ser Tyr Lys Lys Leu Ile Met Tyr Ser Ala  
 66 275 280 285  
 67 His Asp Thr Thr Val Ser Gly Leu Gln Met Ala Leu Asp Val Tyr Asn  
 68 290 295 300  
 69 Gly Leu Leu Pro Pro Tyr Ala Ser Cys His Leu Thr Glu Leu Tyr Phe  
 70 305 310 315 320  
 71 Glu Lys Gly Glu Tyr Phe Val Glu Met Tyr Tyr Arg Asn Glu Thr Gln  
 72 325 330 335  
 73 His Glu Pro Tyr Pro Leu Met Leu Pro Gly Cys Ser Pro Ser Cys Pro  
 74 340 345 350  
 75 Leu Glu Arg Phe Ala Glu Leu Val Gly Pro Val Ile Pro Gln Asp Trp  
 76 355 360 365  
 77 Ser Thr Glu Cys Met Thr Thr Asn Ser His Gln Gly Thr Glu Asp Ser  
 78 370 375 380  
 79 Thr Asp  
 80 385

82 &lt;210&gt; SEQ ID NO: 2

83 &lt;211&gt; LENGTH: 3089

84 &lt;212&gt; TYPE: DNA

85 &lt;213&gt; ORGANISM: Homo sapiens

87 &lt;400&gt; SEQUENCE: 2

88 agcagttcct cctaactcct gccagaaaca gctctcctca acatgagagc tgcacccctc 60  
 89 ctcttggtcca gggcagcaag ccttagcctt ggcttcttgt ttctgctttt tttctggcta 120  
 90 gaccgaagtg tactagccaa ggagttgaag tttgtgactt tgggtgttcg gcatggagac 180  
 91 cgaagtccca ttgacacctt tcccactgac cccataaagg aatcctcatg gccacaagga 240  
 92 tttggccaac tcacccagct gggcatggag cagcattatg aacttggaga gtatataaga 300  
 93 aagagatata gaaaattctt gaatgagtcc tataaacatg aacagggtta tattcgaagc 360  
 94 acagacgttg accggacttt gatgagtgtc atgacaaacc tggcagccct gtttccccc 420  
 95 gaaggtgtca gcatctggaa tcctatccta ctctggcagc ccattcccgt gcacacagtt 480  
 96 cctctttctg aagatcagtt gctatacctg cctttcagga actgccctcg ttttcaagaa 540  
 97 cttgagagtg agactttgaa atcagaggaa ttccagaaga ggctgcaccc ttataaggat 600  
 98 tttatagcta ccttgggaaa actttcagga ttacatggcc aggacctttt tggaatttgg 660  
 99 agtaaagtct acgacccttt atattgtgag agtggtcaca atttcacttt accctcctgg 720  
 100 gccactgagg acaccatgac taagttgaga gaattgtcag aattgtccct cctgtccctc 780  
 101 tatggaattc acaagcagaa agagaaatct aggtcccaag ggggtgtcct ggtcaatgaa 840  
 102 atcctcaatc acatgaagag agcaactcag ataccaagct acaaaaaact tatcatgtat 900  
 103 tctgcgcagc acactactgt gagtggccta cagatggcgc tagatgttta caacggactc 960

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104 ctctctccct atgcttcttg ccacttgacy gaattgtact ttgagaaggg ggagtacttt 1020
105 gtggagatgt actaccggaa tgagacgcag caccagccgt atccccctcat gctacctggc 1080
106 tgcagcccca gctgtcctct ggagaggttt gctgagctgg ttggccctgt gatccctcaa 1140
107 gactggtcca cggagtgtat gaccacaaac agccatcaag gtactgagga cagtacagat 1200
108 tagtgtgcac agagatctct gtagaaagag tagctgccct ttctcagggc agatgatgct 1260
109 ttgagaacat actttggcca ttacccccca gctttgagga aaatgggctt tggatgatta 1320
110 ttttatgttt tagggacccc caacctcagg caattcctac ctcttcacct gacctgccc 1380
111 ccacttgcca taaaaacttag ctaagttttg ttttgttttt cagcgttaat gtaaaagggc 1440
112 agcagtgcc aataataatc agagataaag cttaggtcaa agttcataga gttcccataga 1500
113 actatatgac tggccacaca ggatcttttg tatttaagga ttctgagatt ttgcttgagc 1560
114 aggattagat aagtctgttc tttaaatttc tgaatggaa cagatttcaa aaaaaattcc 1620
115 cacaatctag ggtgggaaca aggaaggaaa gatgtgaata ggctgatggg gaaaaaacca 1680
116 atttaccat cagttccagc cttctctcaa ggagaggcaa agaaaggaga tacagtggag 1740
117 acatctggaa agttttctcc actggaaaaa tgctactatc tgtttttata tttctgttaa 1800
118 aatatatgag gctacagaac taaaaattaa aacctctttg tgtcccttgg tcctggaaca 1860
119 tttatgttcc ttttaaagaa acaaaaatca aactttacag aaagatttga tgtatgtaat 1920
120 acatatagca gctcttgaag tatatatatc atagcaaata agtcatctga tgagaacaag 1980
121 ctatttgggc acaacacatc aggaagaga gcaccacgtg atggagtttc tccagaagct 2040
122 ccagtataa gagatgttga ctctaaagtt gatttaaggc caggcatggt ggtttacgc 2100
123 tataatccca gcattttggg actccgaggt gggcagatca cttgagctca ggagctcaag 2160
124 atcagcctgg gcaacatggt gaaaccttgt ctctacataa aatacaaaaa cttagatggg 2220
125 catggtgctg tgtgcctata gtccactact tgtggggcta aggcaggagg atcacttgag 2280
126 ccccgaggt cgaggctaca gtgacccaag agtgactac tgtactccag ccagggcaag 2340
127 agagcgagac cctgtctcaa taaataaata aataaataaa taaataaata aataaaaaa 2400
128 aagttgatta agaaaggaag tataggccag gcacagtggc tcacacctgt aatccttgca 2460
129 ttttgaagg ctgaggcagg aggatcactt taggcctggg gtgttcaaga ccagcctggg 2520
130 caacatagtg agacactgtc tctacaaaaa aaaggaagga agggacacat atcaaaactga 2580
131 acaaaaatta gaaatgtaat tatgttatgt tctaagtgcc tccaagttca aaacttattg 2640
132 gaatgttgag agtgtgggta cgaaatacgt taggaggaca aaaggaatgt gtaagtcttt 2700
133 aatgccgata tcttcagaaa acctaagcaa acttacaggt cctgctgaaa ctgccactc 2760
134 tgcaagaaga aatcatgata tagctttcca tgtggcagat ctacatgtct agagaacact 2820
135 gtgctctatt accattatgg ataaagatga gatggtttct agagatgggt tctactggct 2880
136 gccagaatct agagcaaaagc catccccct cctggttggg cacagaatga ctgacaaaga 2940
137 catcgattga tatgcttctt tgtgttattt ccctcccaag taaatgtttg tccttgggtc 3000
138 cattttctat gcttgtaact gtcttctagc agtgagccaa atgtaaaata gtgaataaag 3060
139 tcattattag gaagttcaaa aaaaaaaaaa 3089

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141 &lt;210&gt; SEQ ID NO: 3

142 &lt;211&gt; LENGTH: 144

143 &lt;212&gt; TYPE: PRT

144 &lt;213&gt; ORGANISM: Homo sapiens

146 &lt;400&gt; SEQUENCE: 3

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147 Met Trp Leu Gln Ser Leu Leu Leu Leu Gly Thr Val Ala Cys Ser Ile
148 1 5 10 15
149 Ser Ala Pro Ala Arg Ser Pro Ser Pro Ser Thr Gln Pro Trp Glu His
150 20 25 30
151 Val Asn Ala Ile Gln Glu Ala Arg Arg Leu Leu Asn Leu Ser Arg Asp
152 35 40 45
153 Thr Ala Ala Glu Met Asn Glu Thr Val Glu Val Ile Ser Glu Met Phe
154 50 55 60

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155 Asp Leu Gln Glu Pro Thr Cys Leu Gln Thr Arg Leu Glu Leu Tyr Lys
156 65                      70                      75                      80
157 Gln Gly Leu Arg Gly Ser Leu Thr Lys Leu Lys Gly Pro Leu Thr Met
158                      85                      90                      95
159 Met Ala Ser His Tyr Lys Gln His Cys Pro Pro Thr Pro Glu Thr Ser
160                      100                     105                     110
161 Cys Ala Thr Gln Ile Ile Thr Phe Glu Ser Phe Lys Glu Asn Leu Lys
162                      115                     120                     125
163 Asp Phe Leu Leu Val Ile Pro Phe Asp Cys Trp Glu Pro Val Gln Glu
164                      130                     135                     140
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167 <211> LENGTH: 767
168 <212> TYPE: DNA
169 <213> ORGANISM: Homo sapiens
171 <400> SEQUENCE: 4
172 cggaggatgt ggctgcagag cctgctgctc ttgggcactg tggcctgcag catctctgca      60
173 cccgccgct cgcccagccc cagcacgcag ccctgggagc atgtgaatgc catccaggag      120
174 gcccgcgctc tcctgaacct gagtagagac actgctgctg agatgaatga aacagtagaa      180
175 gtcctctcag aaatgtttga cctccagag ccgacctgcc tacagaccgc cctggagctg      240
176 tacaagcagg gcctgcgggg cagcctcacc aagctcaagg gcccttgac catgatagcc      300
177 agccactaca agcagcactg ccctccaacc ccgaaaactt cctgtgcaac ccagattatc      360
178 acctttgaaa gtttcaaaga gaacctgaag gactttctgc ttgtcatccc ctttgactgc      420
179 tgggagccag tccaggagtg agaccggcca gatgaggctg gccaagccgg ggagctgctc      480
180 tctcatgaaa caagagctag aaactcagga tggtcattct ggagggacca aggggtgggc      540
181 cacagccatg gtgggagtg cctggacctg ccctgggcca cactgaccct gatacaggca      600
182 tggcagaaga atgggaatat ttatactga cagaaatcag taatatttat atatttatat      660
183 ttttaaaata tttatttatt ttttatttta agttcatatt ccatatttat tcaagatggt      720
184 ttaccgtaat aattattatt aaaaatatgc ttctaaaaaa aaaaaaaa      767
186 <210> SEQ ID NO: 5
187 <211> LENGTH: 144
188 <212> TYPE: PRT
189 <213> ORGANISM: Artificial Sequence
191 <220> FEATURE:
192 <223> OTHER INFORMATION: Made in a lab from human amino acids
194 <400> SEQUENCE: 5
195 Met Trp Leu Gln Ser Leu Leu Leu Leu Gly Thr Val Ala Cys Ser Ile
196 1                      5                      10                      15
197 Ser Ala Pro Ala Arg Ser Pro Ser Pro Ser Thr Gln Pro Trp Glu His
198                      20                      25                      30
199 Val Asn Ala Ile Gln Glu Ala Arg Arg Leu Leu Asn Leu Ser Arg Asp
200                      35                      40                      45
201 Thr Ala Ala Glu Met Asn Glu Thr Val Glu Val Ile Ser Glu Met Phe
202                      50                      55                      60
203 Asp Leu Gln Glu Pro Thr Cys Leu Gln Thr Arg Leu Glu Leu Tyr Lys
204 65                      70                      75                      80
205 Gln Gly Leu Arg Gly Ser Leu Thr Lys Leu Lys Gly Pro Leu Thr Met
206                      85                      90                      95
207 Met Ala Ser His Tyr Lys Gln His Cys Pro Pro Thr Pro Glu Thr Ser
208                      100                     105                     110

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209 Cys Ala Thr Gln Ile Ile Thr Phe Glu Ser Phe Lys Glu Asn Leu Lys
210      115      120      125
211 Asp Phe Leu Leu Val Ile Pro Phe Asp Cys Trp Glu Pro Val Gln Glu
212      130      135      140
214 <210> SEQ ID NO: 6
215 <211> LENGTH: 767
216 <212> TYPE: DNA
217 <213> ORGANISM: Artificial Sequence
219 <220> FEATURE:
220 <223> OTHER INFORMATION: Made in a lab from human nucleic acids
222 <400> SEQUENCE: 6
223 cggaggatgt ggctgcagag cctgctgctc ttgggcactg tggcctgcag catctctgca      60
224 cccgcccgtc cgcccagccc cagcacgcag ccctgggagc atgtgaatgc catccaggag      120
225 gcccggcgtc tcctgaacct gagtagagac actgctgctg agatgaatga aacagtagaa      180
226 gtcatctcag aaatgtttga cctccaggag ccgacctgcc tacagaccgc cctggagctg      240
227 tacaagcagg gctgcggggg cagcctcacc aagctcaagg gcccttgac catgatagcc      300
228 agccactaca agcagcactg ccctccaacc ccggaactt cctgtgcaac ccagattatc      360
229 acctttgaaa gtttcaaaga gaacctgaag gactttctgc ttgtcatccc ctttgactgc      420
230 cgggagccag tccaggagtg agacgggcca gatgaggctg gccaaagcgg ggagctgctc      480
231 tctcatgaaa caagagctag aaactcagga tgggtcatctt ggagggaacca aggggtgggc      540
232 cacagccatg gtgggagtgg cctggacctg ccctgggcca cactgaccct gatacaggca      600
233 tggcagaaga atgggaatat ttatactga cagaaatcag taatatttat atatttatat      660
234 ttttaaaata tttatttatt tatttattta agttcatatt ccatatttat tcaagatgtt      720
235 ttaccgtaat aattattatt aaaaatatgc ttctaaaaaa aaaaaaa      767

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**VERIFICATION SUMMARY**

DATE: 01/24/2007

PATENT APPLICATION: US/10/666,122A

TIME: 11:12:21

Input Set : A:\11311.1002U.txt

Output Set: N:\CRF4\01242007\J666122A.raw